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CEREBRO-SPINAL MENINGITIS.

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DURING the past winter there have been five cases of cerebro-spinal meningitis, or, as it is more popularly termed, "spotted fever," in the City Hospital.

CASE I.—The first case was that of a young woman, who entered with an ordinary pneumonia on the 5th day of November last. She died on the 9th, having shown her symptoms of meningitis but a few hours.

CASE II.—The second was that of a woman who entered Sept. 20th, with neuralgia. She improved steadily until Nov. 24th, when she had her premonitory symptoms of meningitis, and she died in a few hours, early on the 25th. In this case, a petechial eruption came out on her shoulders and chest after death.

The other three cases came under my charge.

CASE III.—My term of service commencing on Dec. 1st, I found one of them in an Irish girl, who had been in medium health, not markedly robust. She entered the hospital in the early part of November for a mild attack of rheumatism, and was convalescent, when, Nov. 30th, she was found, at the morning visit, to be partially comatose, squinting, convulsed, frothing at the mouth, pulse fluctuating from 76 to 96. Her consciousness was restored towards night, under the applications of ice to the head, sinapisms to the feet, and stimulating enemata. Excessive pain became developed in the back of the head, cervical and dorsal vertebræ, and also in the præcordial region. The tenderness of the spine was so great as to prevent anything like voluntary motion of the limbs or body, the slightest touch causing excessive pain and convulsions. She had very constant convulsion of the face, most marked about the mouth. Her

pupils were dilated, with converging strabismus. Her tongue was covered with a white coat, soon becoming brown, dry and typhoidal. Her mind was inclined to wander and to hallucinations, yet when spoken to she would generally give lucid answers. Her bowels were obstinately constipated. Her pulse varied from day to day, ranging from 60 to 90, generally being between 80 and 90. Respirations were about 40.

On the 5th of December I commenced giving her powdered ergot, gr. vi., every six hours, and in less than forty-eight hours the catamenia appeared. There was a general amelioration of the symptoms until on the 19th of December, when her convulsions were more severe and more general, and accompanied by opisthotonos, so that I was enabled to pass my arm beneath her and sweep it from her shoulders to below the hips without touching her as she lay on her back in bed. On the 25th of December, I omitted the ergot; she continued to improve slowly until the 14th of January, when I allowed her to sit up fifteen minutes in bed, and applied over the spine emp. belladonnæ, twelve by four inches.

On the 10th of February she had a relapse, and a return of convulsion, squinting, and dilatation of pupil. The pulse exhibited an increased rapidity, but less force. Cold extremities, with opisthotonos and digging back of head into pillow, also returned. I could only account for this return from her having moved and excited herself too much. There was frequent recurrence of the convulsion and opisthotonos, with panting respiration, sounding like a dog that has been running, in hot weather, and loud enough to be heard through the ward, until the 20th of February, since which time she has improved in all respects, with the exception of slight convulsions on the 24th of February and 5th of March. She is now in her right mind, up and about, but since the middle of April she has been annoyed by her old rheumatic symptoms and pains.

Case IV.—The fourth case was in the person of a young woman of American birth, of somewhat scrofulous habit, a dressmaker by trade. She entered, Nov. 3d, with a mild attack of typhoid fever, was convalescent, but on Dec. 2d she complained of headache in the evening, was flushed, had dilated pupils, convulsed face, head rolling from side to side, great pain in back of head and neck, and marked tenderness of cervical vertebræ. Pulse 60, hard, thin.

The next day, the 3d, her pulse was soft, 100. The great tenderness of the cervical had extended to the dorsal vertebræ, with great præcordial pain. She had assumed the fixed position on her back. Her tongue was covered with a white, pasty coat, and was tremulous. Pulv. ergotæ, gr. vi., was ordered every six hours. Then ensued rigidity with occasional tetanic spasms, scanty micturition, most obstinate constipation; her tongue became typhoidal and her face flushed, eyes suffused, pupils widely dilated, convulsions of face and mouth almost constant, most marked on right side. She

answered questions correctly, but failed to notice persons or objects unless spoken to. Pulse 90 to 96; respirations 40. Persistent sleeplessness.

The patient continued in this general condition—excessive pain in back of head and spine, and over heart, sleepless to a great extent, motionless except when convulsed, rigid limbs, pupils widely dilated many days, not answering to stimulus of light, with photophobia, and increased sensitiveness to sounds, some days showing confusion of mind, others apparently clear, with attacks of epistaxis and occasional prolonged convulsions and opisthotonos—throughout all of December. The ergot was omitted Dec. 24th.

On the 29th of December, I gave her extract of belladonna, but a few doses of one sixth of a grain each produced dizziness and dry fauces, but no relief.

By the middle of January she was decidedly better; still there was great sleeplessness, constipation, spinal pain, and very frequent convulsions. Bromide of potassium, in large doses, failed to produce sleep. Ergot was again administered for one week, and on the 17th I applied a belladonna plaster, twelve inches by four, over the spine, with decided relief.

At the end of January she was much distressed by nausea and vomiting, and for about a fortnight she apparently rejected every sort and amount of food—even milk and lime water, in drachm doses, causing emesis; but having a chloroform epithem applied to the epigastrium, the fumes arising quelled the pain and convulsions, and procured some sound sleep. This hint was acted on, and the severer convulsions after this were controlled by the chloroform used in this manner. On the 12th of February, ice cream was received as the first thing she could retain without vomiting.

After this she gradually improved in condition, the constipation being overcome by enemata, though the injection was always the cause of a convulsion.

On March 25th she sat up in bed for a few minutes.

On the 31st, she sat up one hour, and, with the aid of an assistant, walked four steps.

On the 5th of April she had a relapse, increased pain in head and back, convulsion of face and arms; heightened pulse, and respirations 52; coated tongue and unconsciousness. Ergot was resumed for four days. The convulsions, &c., with impaired mind, the memory not extending over the events of an hour, lasted until the 7th; since then she has again improved, and to-day again has her dress on for a while, and she probably will recover.

Case V.—The fifth and last case was that of a very strong, healthy woman, who entered on Nov. 8th, with a mild attack of typhoid. She was nearly well, when, on the 3d of December, she was taken ill with some frontal headache, pain over dorsal vertebræ and severe epigastric pain. Pulse 96; suffused eyes; flushed face; con-

stipation, as in the other cases. ℞. Pulv. ergot., gr. vi., every six hours. This was continued till the 12th. Ice to head. Mustard to feet. She continued to improve gradually till the 18th of December, when she had a very severe general convulsion, lasting ten minutes, with intense pain in head; after this, convalescence progressed steadily until the 27th of January, when she was discharged well.

These cases are interesting from their parallelism, and in the fact that they all were developed without known cause on the same side of the same ward, and at about the same time. Their severity in the three last at any rate were proportionate to the constitutional strength of the patients. They all had intense spinal pain and tenderness, headache, and præcordial pain. Their positions in bed were very similar. There was likewise a similarity in the almost unconquerable constipation during the severity of the sickness; and the marked relapses of each of the three after convalescence was apparently well established. They all had bladders of ice to the head by day and night for weeks, and all were stimulated and nourished as highly as possible. They were seen daily by Dr. Upham, who was in attendance at the same time, and who recognized them as the same disease he had seen so much of in the Stanly Hospital, at Newbern, N. C., and it was at his suggestion that I tried the treatment by ergot in them all, as being the treatment that was most efficacious in the Stanly Hospital cases; it being adopted on the idea advanced by Dr. Brown-Séquard of the property of ergot being to constringe the bloodvessels of the spinal cord, and to divert the blood to other organs—in woman, to the genito-urinary organs.

The patients all acknowledge that the first three weeks of their sickness is an entire blank to them, their first recollections being about Christmas time.

PULMONARY TUBERCULOSIS.—A REVIEW.

[Concluded from page 240.]

Among the facts reported in this part of the volume, are found two cases of peculiar interest, not so much for their happy result as for the length of the uvula described by our author. One person is described as having a uvula two inches (p. 213), and another three inches long (p. 214) and correspondingly enlarged. We have seen a good many uvulas in our day, but have never met with such giants.

Interesting cases of erosion of the epiglottis, and ulcerations about the throat, and of the sudden relief given to cough by topical applications, are given. We have seen similar. But Dr. Green must not ask us to believe that the simple amputation of the uvula, or the touching of ulcers in the throat with nitrate of silver, has prevented phthisis in these cases. We need *proof* of this, while admitting the great value of Dr. G.'s operations in relieving actual bodily

distress and mental anxiety—the latter rather increased, as appears to us, by the strong assertions of Dr. G. that such irritations do, in certain cases, necessarily tend to produce tubercles in the lungs.

We have already extended this notice of Dr. G.'s work far beyond what we intended. We have attempted to deal fairly with it, and to give our candid opinion of it. But the really salient point of it remains to be examined.

In Chapter III. we find Dr. Green's "Treatment of chronic phthisis, following follicular degeneration of the mucous membrane of the air-passages."—(Page 279.)

We might criticize the title as an example of begging the whole question, if Dr. G. means that the phthisis follows the follicular disease as effect follows a cause. He has *not*, as yet, *proved* that point. But we prefer to analyze, and not captiously criticize.

He divides the subject into—1st. The præ-tubercular stage of phthisis. 2d. The bronchitic stage. 3. The tubercular stage. Now we agree, as we have already intimated, with the idea of there being a *præ*-tubercular stage. Yet we think that many of the wisest of our profession do not allow of this. We believe that very frequently, in certain cases and in certain families, we may strongly anticipate the future development of tubercular disease of the lung, even before any marked physical signs about the lungs can be observed. We cannot be sure, but we think that most physicians in actual practice will agree with us that, in such cases, they carry out a plan of treatment entirely analogous to what they would if they really knew that tubercles were actually existing. But in this stage, as we understand it, the throat affection, on which Dr. Green lays so much stress, and the cure of which he claims will prevent phthisis, often bears a very small part. It is the *general undermining* of all the functions of the body, and sometimes, we think, without a trace of throat irritation. Of course, none of the cases brought forward by Dr. Green had physical signs in the lungs, but the five presented by him had some local throat trouble. All were treated by topical applications to the nasal passages, uvula, single follicles on the pharynx or tonsils, &c. Dr. Green says:—"Every year during the last twelve or fifteen years I have saved many valuable lives, I believe, by the employment of prompt and radical measures in the treatment of these well-marked cases of follicular degeneration."—(Page 285.)

Again, on page 289, he repeats the same assertion in still stronger language. "I desire, sincerely desire to impress upon the profession the great importance of *excision* of the heterologous or pathological formations which are so frequently found in degenerated tonsils. Every day of my life I have persons presenting themselves at my office, whose lives are saved only by this operation, followed by appropriate remedies." Dr. Green will pardon us if we say he

is more sanguine of his ability to cure phthisis than we can be; more sanguine than most of the profession is at present, more, we fear, than it will be, even if it adopts all Dr. Green's methods. We doubt not Dr. Green's perfect sincerity, but only demand more proof of the truth of his assertions.

Section II.—The bronchitic stage. Upon this subject we are wholly at variance with Dr. Green. For during a practice of some years, and during which time we have seen a fair share of pulmonary disease, we do not *remember but one single case in which phthisis followed a perfectly distinct and unequivocal attack of bronchitis*, as proved by all the rational and physical signs of that disease.

The cases named by Dr. Green do not, as we believe, sustain his view. That of the gallant General (page 291) proves nothing more than what we most cheerfully admit, because we have had like cases, viz., that under the treatment, internal and topical, pursued by Dr. Green, combined with change of air and relaxation from official duties, the General was, at first, partially relieved, and that subsequently, after fuller treatment (injection into the tubes, &c.) a troublesome cough was so much benefited (we are not sure of entire cure) that he returned to duty. We may congratulate the patient, the Doctor, and the country likewise, that a loyal and valuable officer was by the means used restored to active service in putting down this vile rebellion, but the case proves absolutely nothing about the treatment of consumption or the prevention of it.

Another case is given, in which evident disease of both lungs was noticed: and Dr. Green says, page 294—

"It is unnecessary to detail at length the treatment adopted. Both topical and general remedies were employed. Applications of a strong solution of nitrate of silver were made successively to the fauces, the epiglottis—its border and laryngeal surface—to the glottis, and subsequently into the larynx, and thoroughly down into the trachea and bronchi; the patient was invigorated by tonics and good living. Under this treatment the patient gradually and constantly improved. He regained his voice, his cough diminished, and his strength and flesh were considerably increased."

The patient, however, never really recovered, and died four years afterwards of hæmoptysis. Former tubercles; no recent ones were found, and cicatrices in the trachea were found. Dr. Green thinks they were, and probably they were, cured by his local applications. And as far as one fact goes, it proves that, possibly, the local application of the nitrate may cure some ulcerations of the trachea and larynx, which would have been considered by Louis as the result of the passage of purulent matter from the lungs, and therefore as probably not so amenable to treatment as Dr. G. claims they are. But when Dr. Green attempts to prove that this local treatment was the chief cause of cure of the tubercles of the lungs, it seems to us that he attempts to prove too much, and that he forgets tonics and good

living were also used. We have all seen cases of tubercular disease, even in the advanced stage of cavities, cured *without local treatment.* We must, however, confess that this case has given us some courage to carry persistently onward the local together with the general treatment of these unfortunate cases of laryngeal phthisis. We hope we shall be as successful in all our cases, even as Dr. G. was in this, but we anticipate disappointment; for hitherto in our hands such local treatment has been of little avail, save to relieve, in some few cases and in some slight degree, the local suffering of the patient. We have never seen an undoubted case of laryngeal phthisis cured by it, and we have seen some injured. Possibly the fault may have been with us, and this is one reason why we wish Dr. Green had written less of theory and had given us more of facts, so by the interpretation of them we might have more courage in undertaking his last and still more heroic methods.

These are brought forward in Section III. of this Chapter, page 297, "Tubercular stage of phthisis." It is all important to anticipate this stage by treatment of the throat ailments which precede. Dr. Green says:—

"The attempt has not been made in this work to trace distinctly and positively the line of demarcation between the non-tubercular and the bronchitic stage of phthisis on the one hand, and the tubercular stage of the disease on the other. In the first chapter of the work we alluded to the unfortunate fact, that it is not until the antecedents have given place to the consequent—not until the morbid product has to some extent blocked up the air-cells, that the physical signs, which constitute the only positive evidence of the actual presence of tubercular disease, disclose to us the true nature of the malady. It has been constantly insisted upon that deterioration in the cellular elements of the aerial membrane may commence, and often continue through an indefinite period, before proliferation shall take place in the air-cells of the lungs."

But he likewise adds, that "alterative medicines and tonics," together "with topical treatment," should be "persistently employed." "Iodide of potassium in drachm doses, with topical applications, for months."

But owing to the difficulty of introducing the sponge into the trachea and air-tubes, or, in other words, to use the same local treatment for the lungs as that used for the throat, he proposes "catheterism of the bronchial tubes."

This operation, although the description of it occupies only twenty-five of the 350 pages of the volume, is the most important suggestion, and by its adoption or rejection by the profession will Dr. Green's book eventually be judged. Here is a bold proposition, viz., to inject, by means of a gum-elastic catheter, into the bronchial tubes a solution of nitrate of silver.

We all remember the violent discussions that arose in New York in regard to Dr. Green's original suggestion of passing a catheter

into the trachea. Some able men in the profession even now deny the possibility of so doing. In our opinion, Dr. Green is correct. We believe it can be done. We can use the probang thus, and also the catheter, at times, easily. But the proper period of the respiratory act, viz., the moment when the patient has fully inspired and is just on the point of expiring, must be the chosen time. In very many cases the local application simply *to* the vocal cords has answered all the purposes of relief without any passage through. We know many patients subject to asthma who have obtained vast relief in this way. We have never cured a case of phthisis, or any case in which we strongly suspected the disease, by simply using the probang. Dr. Green would say, perhaps, that by thoroughly cauterizing the tubes we might have done so.

Years since, we tried catheterism, only a few times, it is true. These experiments did not induce us to carry out the system, more especially as we heard rumors of unfortunate results in one of the first of Dr. Green's cases. We regret that Dr. Green has not even alluded to the well-known report of the case of a gentleman who was said never to have recovered from the effects of an injection made by Dr. Green himself. It would have been better to let us know the worst about any such matter. Now, a doubt remains. But Dr. Green quotes Dr. Bennett, of Edinburgh, as saying that this method may form a new era in the treatment of pulmonary disease.* This was in 1858. But one year afterwards Dr. B. informed us that he was really afraid to use it, because he thought one of his patients would have died after its use. Dr. Green and Dr. Richards both had cases of violent spasm and great distress. Trousseau *thinks* injection of nitrate of silver into the bronchi killed one of his patients. It is by no means certain that it did so; but the report of the case shows the fears of the eminent Professor of Therapeutics at the Ecole de Médicine.

Dr. Green says, however, as the result of his experiments on animals, and the use of this method on his patients, that these difficulties may be avoided if the following rules be observed:—1st. Use a very mild solution—viz., gr. v. or x. argent. nitrat. to ʒ i. of water. 2d. If there be any spasmodic action of the larynx, the tube should be immediately withdrawn and no injection made. 3d. Patients should be gradually accustomed to manipulations about the throat by previously, for days, using the probang.

On page 316 is a long statement about 106 cases, which, we regret to say, neither we nor two assistants can possibly reduce to any tabular analysis, so that the facts will agree with Dr. G.'s general remarks. This is the more extraordinary, because almost identically the same words were used several years ago (*New York Medical Journal*), and it is strange that Dr. G. repeats the same rather inco-

* Clinical Lectures on Medicine, p. 609.

herent paragraphs. But although we cannot make this tabular statement agree with the preceding remarks by Dr. Green, one thing is plain, that out of 114 cases only 10, or at the utmost 24, received no benefit. But let us examine more closely. Of the phthisical cases, none of the *severer* forms were cured; 25, or about one third, were relieved, and "lives were probably prolonged"; and 7 received no benefit. Of the milder forms, 12, or about one third, were cured "*apparently.*" We quote and italicize, and the thought that we have while reading it is, that Dr. Green himself has some doubt about the results. Five are, or were, in good health when heard from; 17 were much, 3 a little, and 3 not at all relieved. Speaking generally, we may say that of the cases of early phthisis, 17, or a little more than two fifths, were apparently cured; 20, or one half, were relieved; and only about one sixteenth failed of relief. Of the cases of *bronchitis*, more than one half were *cured*, and the remainder were much improved. If the above results are correct, and we can have perfect confidence in the powers of diagnosis of Dr. Green, we must deem them as of the highest importance. In suggesting the doubt we do not mean to intimate any disrespect to Dr. Green's diagnosis in the cases referred to. But the results are so remarkable, that upon this ground alone, we claim that Dr. Green should have published an exact record of his cases, with a clear account of the progress of the physical and rational signs towards a cure. Unless that is done, there will be a doubt until others have tested for themselves the value of catheterism.

Meanwhile, we will terminate this part of our subject with the following quotation (page 317):—

"This method of treatment, in this class of diseases, has been continued, more or less, since the report to which I have referred was made; and such has been the amount of success which has continued to attend this plan of treatment up to the present time, I am now ready to affirm, after an experience of many years, in a field of observation unusually large, that *if I was required to relinquish all other known therapeutic measures or topical medication in the treatment of diseases of the chest, I should choose the latter, with hygienic means alone, in preference to the entire class of remedies ordinarily employed in the treatment of these diseases.*"

In Chapter VI. are given Dr. Green's views of "General Remedies." From it we infer that Dr. G. is not one of the modern sceptics in regard to medicines. In his hands arsenic is a "highly efficacious" remedy "in all stages of chronic phthisis." *Manganese* has given "signal benefit." Hydrocyanic acid will exert in some cases "a powerful and decidedly happy influence" on follicular bronchitis. The remarks are brief, and merely express the general views of the author upon the subject.

In the above analysis we have endeavored to do entire justice to Dr. Green. We probably shall not satisfy either the friends or the

opponents of that gentleman. Although agreeing with him that local applications to, and operations on, the throat and larynx are of immense benefit to some troublesome coughs, we do not feel that it is yet "*proven*" that such local applications prevent phthisis, or that catheterism of the bronchial tubes cures it. *A priori*, from our own experience, not only of the innocuousness of nitrate of silver when applied to the larynx, but of its great benefit in cases of asthma and some coughs, we should not be inclined to fear its application lower down, or into the bronchial tubes. The only objection would be the difficult and troublesome nature of the operation. A skilful manipulator might overcome all objections. The proof of the truth or falsity of Dr. Green's views is yet to be given. Meanwhile we must admit that our author has thoroughly opened the subject, and if eventually the profession should decide his views to be correct, Dr. G. will have, and ought to have, greater fame for his suggestions in regard to the etiology and treatment of phthisis than any other writer, either of the present or of past times.

ON A NEW MODE OF TREATING DISEASES OF THE CAVITY OF THE NOSE.

By J. L. W. Thudichum, M.D., M.R.C.P., Lettsomian Professor of Medicine of the Medical Society of London.

The treatment of diseases of the cavity of the nose has hitherto been attended with very great difficulties, owing to the circumstance that the cavity is large, complicated by many sinuosities, interrupted by many thin bony and membranous projections, and therefore little accessible, and for the most part not accessible at all, to instruments by which growths might be removed, or topical remedies applied. The removal of excrescences from the lower and median nasal canal was yet the most successful of surgical operations, although it was frequently left incomplete, or remained unavailing, owing to the speedy return of the polypi. But the topical application of remedies for the treatment of acute and chronic affections of the nasal cavity, which is certainly the principal therapeutic requirement, and in many cases prevents the formation of polypi, could only be attempted by mechanical contrivances which were so objectionable to the patients that after longer or shorter trials they had to be abandoned. I have had under my own care several important cases of affection of the nasal cavity, in which the mere possibility of cleansing the cavity of the nose would have been a great boon to the patients; others, in which I have no doubt the application of remedies, such as we are in the habit of using in conjunctivitis, would have effected a speedy recovery from painful and troublesome conditions. The only mode of cleansing the cavity of the nose which was then known in medical science was by injections with a syringe; but, ow-

ing to the velocity with which the injected fluid touched the walls of the nose, this process always created much irritation, pain, sternutation and lachrymation, and the patients mostly opposed the entrance of the fluid by expiratory efforts, which, indeed, were the only means they had of preventing the fluids from running down the choanæ and reaching the larynx. The mere effect of pure water upon the Schneiderian membrane being highly irritating, two causes combined to defeat the object of injections of water; and when medicines which might be supposed to have a beneficial effect upon the diseased Schneiderian were dissolved in the water, they, although perhaps better tolerated than pure water, could not be kept sufficiently long in contact with the affected parts to exercise upon them even such slight medicinal action as their necessarily diluted state permitted. There was a third application that could be made—namely, the introduction of medicines in the form of fatty or mucilaginous ointments. In one case in which I endeavored to benefit a chronic ozæna—a residue of scarlet fever—by topical applications, a solution of sulphate of zinc in intimate mixture with lard had a most decided effect, the patient being much improved, though not cured. But this application of ointment to the surface of the lower canal of the nose, and to a part of the median canal—which are the only portions that, as a rule, can be reached, even by clever manipulation—is the most objectionable of any, so far as its accompaniments of irritation and pain are concerned, sternutation and lachrymation being not rarely long continued after it, and the peculiar pain producing a reluctance on the part of the patient, which it is difficult to overcome in young and old people. All these applications, then, were partial, imperfect, irritating, and consequently unavailing to effect the desired end. Many cases of superficial ulceration ended in caries, embittering the life of the patients, and through the odor making intercourse impossible and family relations troublesome; other cases of chronic inflammation ended in deformity of the external nose and the formation of polypi in its cavity, and produced a constant false resonance of the voice; a number lasted throughout a lifetime, the nose being a constantly weak part, and capable of prostrating the patient at any opportunity which dust and wind might afford; others had consequences even more severe, and the specific ulcerations of the cavity of the nose only too frequently terminated in that sinking of its bridge which is the most painful proclamation of disease with which a patient can become afflicted. Then there were the convulsive affections produced by local irritation in the nose—those cases of fabulous sneezing in which hardly any remedy availed, even in diminishing the number of spasms in time, because the centre and seat of the irritation could not be reached by medical agencies. Truly dangerous were some cases of bleeding from the nose, in which the broken bloodvessel could not be reached by either styptics or mechanical compression,

and could not be made to contract by contact with that most powerful of hæmostatic agents, ice or ice-cold water. Not a few cases of this kind terminated fatally, or required the most desperate measures to prevent the fatal end, such as plugging of the nose and choanæ with sponges or tinder; and these not rarely left a condition of anæmia in which other accidental diseases could put a stop to life with comparative ease, or which continued without the supervention of other diseases, enfeebling and considerably shortening the rest of the life of such patients.

All these difficulties, and many more which might be mentioned, are removed at one stroke by the discovery of Professor Weber, of Halle: that when one side of the nasal cavity is entirely filled through one nostril with fluid by hydrostatic pressure, while the patient is breathing through the mouth, the soft palate completely closes the choanæ, and does not permit any fluid to pass into the pharynx (a physiological fact thus far already discovered by E. H. Weber, of Leipzig, before 1847, and published in Muller's Archiv, 1847, pp. 351–354): while the fluid easily passes into the other cavity, mostly round and over the posterior edge of the septum narium, in some persons also through the frontal sinuses, and escapes from the other open nostril, after having touched every part of the first half of the cavity of the nose, and a great part, certainly the lower and median canal, of the second half. By means of the application of this principle to the treatment of diseases of the nose, it is possible easily and frequently to wash the nasal cavity, to disinfect and deodorize it, to remove the sordes which accumulate so easily in it, and to apply to its surface a great number of beneficial medicinal substances, so as to prevent acute affections from extending, and to incline them towards a speedy recovery: to stop hæmorrhages, allay irritations, and subdue in a remarkable manner chronic affections of the Schneiderian membrane, so as to re-establish a perfectly healthy surface and normal condition of the organ of smell.

Of the medicinal solutions which may be applied to the cavity of the nose.—Although the solutions before enumerated act in a measure as alteratives, resolvents, and escharotics, and, therefore, rarely constitute a sufficient medical application by themselves, yet they are more frequently used for preparing the nose for the application of more energetic and specifically acting solutions. To this latter class belong the solutions of alum, sulphate of zinc, and sulphate of copper —the best astringents; the solutions of nitrate of silver, and bichloride of mercury—the most suitable alteratives; and the solutions of chloride of calcium, in which suboxide or oxide of mercury is suspended in a finely subdivided state, together with the bichloride solutions—the best specifics. Of stimulating solutions, a mixture of eau de Cologne with water or salt-water is sometimes useful.

The probable concentration of these solutions can be surmised from the circumstance that the sensibility of the healthy nasal cavity

stands about midway between that of the eye and the mouth. When the nasal cavity is completely filled with fluid, the specific sense of smell cannot any longer be exercised; even the solution of eau de Cologne is not perceived to be such when it once fills the nose. The sense of smell being thus entirely obliterated by the fluid contained in the nose, the reflex effects which substances may exercise by means of this sense are entirely absent; and the only impingement which the fluids can produce is upon the filaments of sensitive nerves coming from the fifth pair. It is owing partly to this circumstance that comparatively strong medicinal solutions are borne by the nasal cavity without great secretion. Another circumstance favoring the application of stronger solutions is the ready manner in which the healthy surface of the nose defends itself against irritating, chemically-impinging substances by means of a copious flow of mucus. Excoriated or ulcerated parts lack this power of rapid secretion; and hence they are affected by medicinal solutions much more than the healthy parts of the surface of the nasal cavity. What is here stated is the general result of experience and experiment; but, at the same time, I must insist that the application of medicinal solutions in each case should be begun with the greatest caution, as individuals differ greatly in point of irritability of the nasal cavity. In the beginning, therefore, very dilute solutions of medicinal substances should be used, and their strength be increased gradually, after their effect has been well exhausted, by the use of greater quantities applied by a quick flow, or the use of smaller quantities in a slow current distributed over a longer time of contact.

Solution of alum.—Half an ounce of roughly-powdered crystallized alum is dissolved in a small quantity of hot water, and the solution made up to one quart by means of cold and tepid water in such a manner as to ensure that the temperature of the solution should be below, but near to, blood-heat. In superficial ulceration or blenorrhagic conditions this solution is well borne. Ulcerated parts, which before its application were red, mostly appear as white patches after its application, thus showing that the effect of the alum on the ulcerated surface has been considerable. When I was desirous to manage with smaller quantities of solutions, I have sometimes mixed a little permanganate solution with that of alum.

Solution of sulphate of zinc.—From a scruple to a drachm of the sulphate of zinc, dissolved in a quart of warm water, together with half an ounce or an ounce of sulphate of soda or sulphate of magnesia, gives a suitable fluid.

Solution of sulphate of copper.—Of this sulphate also from a scruple to a drachm, mixed with half an ounce or an ounce of soda sulphate or magnesia sulphate, can be dissolved in a quart of warm water.

Solution of acetate of lead.—Of this crystallized acetate from a drachm to two drachms, together with half an ounce or an ounce of

crystallized acetate of soda, may be dissolved in the quart of warm water.

Solution of nitrate of silver.—Of this salt not more than from half a grain to a grain should be dissolved in each ounce of water. A quart of water, therefore, in which previously from half an ounce to an ounce of nitrate of soda has been dissolved, may receive from sixteen to thirty-two grains of the nitrate. In particular cases the solution may be made stronger. The nitrate of potash is not so good as the nitrate of soda, because it has slightly irritating qualities. When it is necessary to use it in an emergency, when soda nitrate cannot be had, the solution should be more diluted.

Solution of bichloride of mercury.—The greatest caution is necessary in the use of this agent, as it has a tendency to produce excoriations on healthy surfaces. The first solution to be employed should be one containing five grains of corrosive sublimate in a quart of water, in which an ounce of common salt is also dissolved.

Solution of chloride of calcium with suspended oxide or suboxide of mercury.—These fluids are the common phagedænic waters, or black and yellow wash, to which common salt has been added. Two drachms of calomel, twelve fluid ounces of lime-water, one ounce of common salt, and twenty ounces of warm water, yield the black solution. One scruple of corrosive sublimate, one ounce of common salt, twelve fluid ounces of lime-water, and twenty fluid ounces of common warm water, yield the yellow wash. These mixtures must be well agitated in the glass vessel while being allowed to run through the nasal cavity.

Sedative solutions.—Of prussic acid forty minims to the quart of warm salt-water, of tincture of opium two drachms, may be taken. These drugs may be added to some of the above solutions of metallic salts. But if this is desired, it is better to substitute a solution of morphia for tincture of opium. The prussic acid is incompatible with the copper, silver, and precipitated mercury solutions; it goes conveniently with the alum and common salt solutions.

Styptic or hæmostatic solutions.—Amongst these, ice-cold salt water, containing an ounce of salt to a pint of ice-water, takes the first place. When this, after having been continued for a considerable time, is insufficient to stop the hæmorrhage, a fluid ounce of the tincture of the sesquichloride of iron may be added to each pint of ice-cold salt-water.

Stimulating solution.—One ounce of eau de Cologne upon ten ounces of salt-water, is a useful stimulant. Strong spirit of wine may be taken in place of the eau de Cologne.

I have now fully, and for some readers perhaps somewhat too explicitly, described a number of medicinal solutions which may with advantage be applied to the treatment of nasal diseases by the method in question. I was desirous to impress upon the memory of the reader the fact that I recommend only such solutions as are

brought up to a certain specific gravity by salts which do not decompose the medicinal agents. There may be cases in which it is desirable to swell the Schneiderian membrane by watery fluid and produce endosmosis, and others in which highly concentrated solutions may beneficially be used to effect exosmosis and shrivel Schneider's membrane. These adaptations, and the various accommodations of the fluids and their degrees of concentration, I must leave to the skill and ingenuity of those who make use of this method. They will also probably multiply the resources of the rhinotherapeutic pharmacy, and thereby add to the success and certainty of this interesting method of treatment.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MAY 11, 1865.

THE ARMY MEDICAL STAFF.*—Honored and respected as we are happy to believe the surgeons of our armies have generally been through the four years' war which has now come to a close, it cannot escape the recollection of our readers that at times there has been more or less complaint that it was wanting in efficiency and fidelity; and exaggerated accounts of mortality from disease and wounds have sometimes been published in a way to give the impression that many lives have been sacrificed from neglect or want of skill. We have occasionally seen, in the correspondence of foreign journals, highly-colored pictures of the unavoidable ravages of war, so presented as to reflect upon the officers whose special duty it was to attend to the health and physical well-being of the troops. Such reflections as implying a general condition of inefficiency and neglect, no properly informed person can for a moment regard as other than libellous or highly colored pictures of the imagination. Whatever of inability there was, early in the war, on the part of the small body of surgeons of the regular army, and the large number of totally inexperienced surgeons of volunteers, to cope with the formidable difficulties of new responsibilities and labors, under a system unavoidably insufficient for the occasion—was, as all men know, most triumphantly overcome by the diligent efforts of the surgeons themselves, seconded by the unstinted aid of the whole people. All honor to the men who labored without rest until our present excellent system was perfected, and all honor to the government which has so liberally seconded the efforts of the medical staff, until at the present time the system may be favorably compared with that of any other nation.

These reflections have been prompted by reading the very interesting and instructive address of Assistant Surgeon Warren Webster, of

* The Army Medical Staff. An Address delivered at the Inauguration of the Dale General Hospital, U.S.A., Worcester, Mass., February 22, 1865. By WARREN WEBSTER, M.D., Assistant Surgeon U. S. Army, in charge of De Camp General Hospital, Davids' Island, New York Harbor. Boston: Wright & Potter. 1865. Published by the Medical Commission of the State of Massachusetts.

the Regular Army, delivered at the inauguration of Dale General Hospital in February last. It was listened to at the time by a large audience with marked attention and delight, and the Medical Commission of the State, who were among the guests on that occasion, have done well in publishing it for the benefit of the profession at large.

Dr. Webster has brought together in the pamphlet before us a vast amount of information, gathered from a variety of sources, which it would be difficult for the general reader to get access to in any other form. The main argument of it is to show, by contrast of the medical department of the United States Army with those of England and France in time of war, to what a degree of perfection our own has attained. The vast amount of work done appears by some of the statistical statements. Thus, we find that—

"In March, 1861, there were no military general hospitals in the United States. To-day there are under the orders of the Surgeon-General, one hundred and ninety-five, with a capacity of one hundred and twenty-nine thousand nine hundred and fifty beds, bounteously provided with everything which the wisdom of Congress, and a soundly educated public opinion on such matters, deem necessary."

And again:—

"At the beginning of the present strife, there were but one hundred and seven commissioned medical officers in the army of the United States. Now there are five hundred commissioned officers of the medical staff, two thousand physicians serving under contract, and a vast force of regimental surgeons and assistant surgeons. The estimate submitted to Congress of the expenses of the medical and hospital service of the army for the year commencing June 30, 1861, and ending June 30, 1862, was one hundred and fifteen thousand dollars. For the year ending June 30, 1863, the expenditure for the same class of items was eleven million five hundred and ninety-four thousand six hundred and fifty dollars; and this amount, it will be remembered, does not embrace soldiers' pay, rations and clothing, or the construction of hospitals. How was it proper or possible, under all the circumstances of our national life, for the government to be, in every sanitary relation, perfectly prepared for events which demanded such instant enlargement of the medical staff, and such enormous increase of expenditure? And yet how quickly were these deficiencies remedied, and from that early hour how constant has been improvement!"

Comparing the working of our army medical system with those of other nations, Dr. Webster shows that even before the present war our own showed manifest superiority over others in its practical working. The circumstances under which the British Army entered upon the Crimean war he considers as fairly comparable with those under which the United States Army entered on the campaign from Vera Cruz to Mexico; but how far different was the result! In regard to the former he says that the imputed deficiencies of the British War Office made the beautiful valley of Devna a literal Valley of Death to the stalwart Anakims of the household troops, whereas—

"The American army, on the other hand, landed from the open sea upon the beach of Vera Cruz, encamped upon localities infected by the vomito, invested the Castle of San Juan de Ulloa, accomplished the reduction of the castle and surrender of the city, with such admirable hygienic precautions that there was no unusual suffering from disease. Throughout that brilliant campaign, from Vera Cruz to the city of Mexico, beginning in March and ending in September, of the same year, there was, with all the keen-eyed watchfulness of correspondents of the newspaper press at home, no official or popular complaint of medical mismanagement. There were no notes of woe, such as went up in dismal chorus from the whole English

press during the latter part of the year 1854, and which inspired the '*Times* Fund of Relief.'"

And so in the terrible suffering and death from disease in the French army towards the close of the Crimean war, presenting such a strange contrast to its comparative immunity at the outset, Dr. Webster finds reason for a contrast most favorable to the workings of our own system. We cannot follow him, as we should like, in his discussion of the defects in the systems of both European armies, but we are particularly struck with the great incongruities and errors of organization in that of the French Army, to which we think he justly attributes in a very great degree the terrible mortality which has been thought by one writer at least to have compelled a hasty peace. He shows that there was the most lamentable want of authority here for the medical officers. These officers, in the general administration of the army hospital service, were under the control of a set of non-medical men, of no higher rank or fitness for the duty than the quartermasters of our service, and were known by the title of *Intendant*. This officer was the only lawful authority in the hospital, and could censure any medical officer or place him under arrest. All of the important matters of hospital construction, air-space, ventilation, &c., were left to him. "He mulcts the surgeon in a sum equal to the cost of any deviation from the established diet tables, and, strangely enough, can direct the apothecary to cast aside any prescription not strictly conformable, in name or contents, to the official formulary. The surgeon may represent the desirableness of suppressing noise or disturbances in or about his wards, separating one class of diseases from anothor, renewing bedding, purifying a ward or removing and punishing an inattentive or disobedient nurse, but can do neither of these things of his own motion." And in the field the case was the same; the surgeons being regarded as merely auxiliaries of the medical department "only when a prescription of medicine or diet is needed, or the performance of some surgical operation required. They cannot give a military command to the lowest inferior, except by the direct and immediate authority of a military officer." Our own system, which allows a certain military rank to all our army surgeons, incomplete as it is in this respect, is far above this. Who can wonder that under such a system, before the end of the Crimean war, the number of the French medical staff became so small as to be entirely inadequate to the needs of the army? In the British army the case was far better, the regimental surgeon having charge of the sick and wounded, and keeping it, being directly responsible to his own department. The result of this better system was seen in the superior condition of the British over the French army in the latter part of the Eastern campaign. The terrible lessons of the Crimean war, together with the earnest appeals of high medical and military officers, opened the eyes of the Emperor to the great defects in the medical department of his army, and in the Italian campaign he was accordingly induced to bestow on the Surgeon-in-Chief of the French forces, Baron Larrey, almost unlimited power in his department. This fortunate confidence led to the happiest results, so that the army entirely escaped the terrible epidemics which led to such mortality in the Crimea, and the large number of wounded were fully provided for. Still it does not appear that any

fixed system of reform has as yet been permanently adopted in this department of the French army.

Dr. Webster next turns to the hospital system of the English army, and shows that it is still wanting in many of the features which have been adopted in our own, which has reached a point very near perfection at the present time. The most important points in our hospital organization are summed up in the following order of the War Department, of December 27th, 1864:—

REGULATIONS CONCERNING HOSPITALS.

I.—U. S. General Hospitals are under the exclusive control of the Surgeon-General, and will be governed by such regulations as the Secretary of War shall approve, upon his recommendation.

II.—Medical officers, commissioned in the regular army or volunteer service, assigned to duty in charge of U. S. General Hospitals, acting under the instructions of the Surgeon-General, and not subject to the orders of local commanders, other than those of geographical military departments, or divisions, are charged with all the duties of commanding officers, and will be obeyed and respected as such. By order of the Secretary of War:

(Signed,) E. D. TOWNSEND,
Assistant Adjutant General.

Dr. Webster's admirable address concludes with a well-deserved tribute to the heroism of army medical officers, showing that in the Mexican war the only losses among General Scott's staff were from the medical portion of it, and that a larger number of surgeons perished in the Crimean war than of any other officers in the allied army. He also refers in terms of just compliment to some of the medical staff of the United States Army, who have recently received brevet promotions, and to the favorable condition of the hospital department of the East in proof of their well-deserving.

We would recommend Dr. Webster's pamphlet to the notice of all who take a just pride in the working of the medical department of our army at the present time; it does its author great credit. We observe that one of our cotemporaries copies the pamphlet in full, in recognition of its value.

THE CONNECTICUT RIVER VALLEY MEDICAL ASSOCIATION held its annual meeting at Bellows Falls, May 3d, Dr. Webber, of Charleston, N. H., President, in the chair. After the report of the Secretary, the Association proceeded to ballot for officers for the ensuing year, with the following result:—*President*, John Crowley, M.D., of Mount Holly, Vt. *Vice President*, James A. Gregg, M.D., of Newport, N. H. *Recording Secretary*, H. D. Holton, M.D., of Putney, Vt. *Corresponding Secretary*, A. B. Crosby, M.D., of Hanover, N. H. *Treasurer*, Samuel Nichols, M.D., of Bellows Falls, Vt. *Auditors*, Drs. D. Campbell and H. D. Holton. *Committee on Credentials*, Drs. Nichols and Sawyer. *Committee on Publication*, Drs. Simons, Holton and Webber. *Delegates to the American Medical Association*, to be held at Boston in June, Drs. John Crowley, Mt. Holly, Vt., L. Sawyer, Springfield, Vt., S. G. Jarvis, Claremont, N. H., Geo. B. Twitchell, Keene, N. H., Samuel Nichols, Bellows Falls, Vt., L. E. Simons, Saxton's River, Vt., H. B. Porter, Paper Mill, N. H., D. R. Story, Proctorsville, Vt., Z. G. Harrington, Chester, Vt., G. W. Hunt, Cornish Flat, N. H. *Dele-*

gates to the New Hampshire State Medical Society, Drs. J. N. Styles, of Windsor, Vt., and L. Graves, of Langdon, N.H. *To the New York State Medical Society*, Drs. B. F. Ketchum, of Brattleboro', Vt., and M. C. Edmonds, of Weston, Vt. *To Vermont State Society*, Drs. French, of Paper Mill, N. H., and Chapin, of Ludlow, Vt. *To the Massachusetts State Medical Society*, Drs. D. W. Hazelton, of Cavendish, Vt., and C. E. Baker, of Claremont, N. H. *To Maine State Medical Society*, Drs. Higginson, of Brattleboro', Vt., and Cummings, of Claremont, N. H. *To Connecticut State Medical Society*, Drs. D. Campbell, of Saxton's River, Vt., and G. F. Gale, of Brattleboro', Vt. *To Rhode Island State Medical Society*, Dr. Volk, of Claremont, N. H.

The retiring President, Dr. Webber, delivered an address upon the Theories of Medicine, which was listened to with marked attention. The thanks of the Association were voted to Dr. Webber, on motion of Dr. Simons.

Dr. Volk exhibited nearly four feet of the small intestine of a young woman, which had passed per anum after a severe attack of colic. It would seem, from the history of the case, that she suffered from occasional attacks of colic. In one of these, three months previous to the one in which the specimen was voided, she suffered from hæmorrhage, but subsequently appeared well. After passing the portion of intestine she became very much emaciated, and died at the end of four months. A *post-mortem* examination revealed a stricture of the small intestine, which measured only sixteen feet in length. This case presents several interesting points :—first, the length of the intestine which sloughed away ; second, the great length of time (three months) that elapsed between the hæmorrhage, when it most probably became detached, and the time when it was passed per anum.

Dr. Holton read a paper upon Puerperal Convulsions, which was discussed by Drs. Hunt, Harrington, Cooper, Frost, Porter and Simons, after which it was referred to the Committee on Publication.

Dr. A. B. Crosby read a paper upon Ovariotomy, which was listened to with great interest, and, on motion of Dr. Campbell, was referred to the Committee on Publication.

The President then called upon the members to state what epidemics, if any, were, or had been prevailing in their several localities, after which the Association adjourned to meet on the first Wednesday of July, at Keene, N. H.

Venereal Diseases in Vienna.—Dr. Sigmund states that, in spite of the regulations respecting prostitution, he had in his venereal wards, in the course of 1864, four thousand patients. The two hundred and seventy-five beds given up to the treatment of sexual diseases are always full. From this number, Dr. Sigmund picks out fifty-two of the most instructive cases, who are placed in the clinical wards, where the Professor makes remarks, and directs the attention of the pupils to the principal phenomena of the disease.—*Lond. Lan.*

Action of Kreosote in the Treatment of Sycosis.—Dr. Masse called the attention of the Paris Academy of Sciences to the use of kreo-

sote to destroy the growth of spores in parasitic affections of the skin. The idea was a deduction of Bèchamp's experiments, proving that this essential substance stops the development of spores of mucedines, and of ova of infusoria in fermentable solutions. Cryptogamous parasites resembling in their organization those growing during fermentation, Dr. M. thought that kreosote ought to act on them in the same way. The experiment was successfully tried with a young soldier having sycosis. Spores and tubes of the *mycrosporon mentagrophyte* were discovered with the microscope in the tubercles of the affected bearded portion of the face. The patient was cured after eight days of treatment, consisting in lotions, made twice daily, with fifty gram. of water, fifty of alcohol, and fifty centigram. of kreosote. —*New York Med. Journal*, from *France Médicale*.

Dr. Richardson, an English chemist, says that iodine, placed in a small box, with a perforated lid, destroys organic poison in rooms. During the continuance of an epidemic smallpox in London he saw the method used with benefit.—*Am. Druggists' Circular*.

The Pennsylvania Coal-fields yielded about 230,000 tons of coal per week for August, September and October, making last year's production 1,700,000 tons more than 1863. The supply is now greater than the demand, and lower prices must result.—*Ibid.*

The number of graduates recently at the College of Physicians and Surgeons, New York, was 78; at the Buffalo Medical College, 50; at the Charity Hospital Medical College, Cleveland, Ohio, 38.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 13th, 1865.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week	43	39	82
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.9	34.9	70.
Average corrected to increased population	00	00	77.4
Death of persons above 90	0	0	0

Pamphlets Received.—Annual Report of the Provost Marshal General, Washington.—Report of the Case of William Gilman, indicted for the murder of Mrs. Harriet B. Swan, before the Supreme Judicial Court of Maine.

Married,—At Newark, N. J., May 2d, Dr. J. T. Calhoun, U.S.A., Surgeon in charge of Ward U. S. General Hospital, to Miss Nora C. Orr.

Deaths in Boston for the week ending Saturday noon, May 13th, 82. Males, 43—Females, 39. Abscess, 1—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 1—bronchitis, 2—burns, 1—cancer, 1—consumption, 19—convulsions, 3—croup, 2—cyanosis, 2—cynanche, 1—diarrhœa, 1—dropsy, 1—erysipelas, 1—scarlet fever, 1—gangrene, 1—disease of the heart, 5—hernia, 1—infantile disease, 1—intemperance, 2—disease of the kidneys, 1—disease of the liver, 1—inflammation of the lungs, 5—marasmus, 1—old age, 1—paralysis, 3—puerperal disease, 1—purpura, 1—rheumatism, 1—smallpox, 5—syphilis, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 30—between 5 and 20 years, 8—between 20 and 40 years, 21—between 40 and 60 years, 14—above 60 years, 19. Born in the United States, 53—Ireland, 21—other places, 8.